

(19) World Intellectual Property Organization  
International Bureau



(43) International Publication Date  
6 July 2006 (06.07.2006)

(10) International Publication Number  
**WO 2006/070905 A1**

(51) International Patent Classification:  
**F01M 9/04 (2006.01)**

(21) International Application Number:  
PCT/JP2005/024204

(22) International Filing Date:  
26 December 2005 (26.12.2005)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
2004-380153 28 December 2004 (28.12.2004) JP

(71) Applicant (for all designated States except US): TOYOTA JIDOSHA KABUSHIKI KAISHA [JP/JP]; 1, Toyota-cho, Toyota-shi, Aichi, 4718571 (JP).

(72) Inventors; and

(75) Inventors/Applicants (for US only): YAMASHITA,

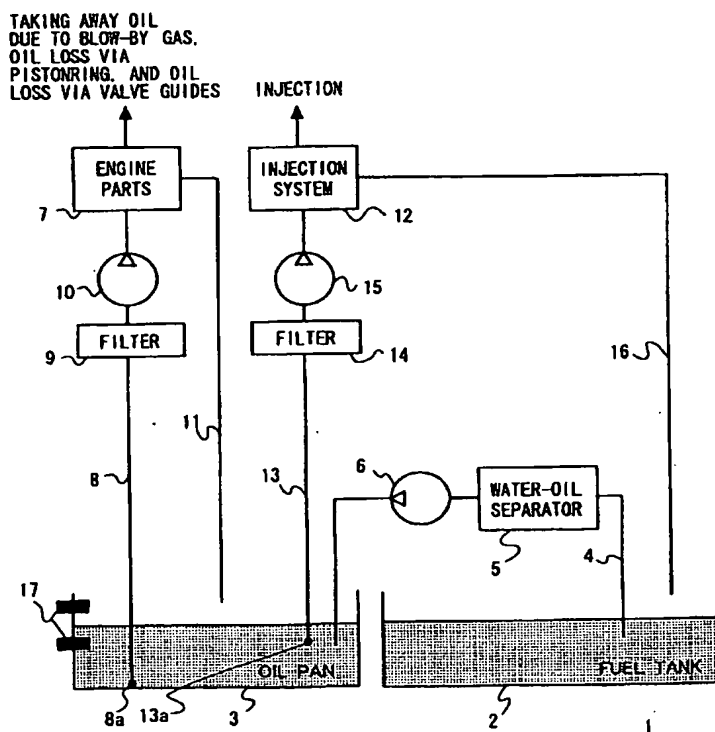
Akira [JP/JP]; c/o TOYOTA JIDOSHA KABUSHIKI KAISHA, 1, Toyota-cho, Toyota-shi, Aichi, 4718571 (JP). MURAKAMI, Motoichi [JP/JP]; c/o TOYOTA JIDOSHA KABUSHIKI KAISHA, 1, Toyota-cho, Toyota-shi, Aichi, 4718571 (JP). ONO, Tomoyuki [JP/JP]; c/o TOYOTA JIDOSHA KABUSHIKI KAISHA, 1, Toyota-cho, Toyota-shi, Aichi, 4718571 (JP). MORITANI, Hiroshi [JP/JP]; c/o KABUSHIKI KAISHA TOYOTA CHUO KENKYUSHO, 41-1, Aza Yokomichi, Oaza Nagakute, Nagakute-cho, Aichi-gun, Aichi, 4801192 (JP). OHMORI, Toshihide [JP/JP]; c/o KABUSHIKI KAISHA TOYOTA CHUO KENKYUSHO, 41-1, Aza Yokomichi, Oaza Nagakute, Nagakute-cho, Aichi-gun, Aichi, 4801192 (JP).

(74) Agent: KATAYAMA, Shuhei; Mitsui Sumitomo Marine Tepco Building, 6-1, Kyobashi 1-chome, Chuo-ku, Tokyo, 1040031 (JP).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,

[Continued on next page]

(54) Title: DIESEL ENGINE LUBRICATED WITH FUEL SUCH AS LIGHT OIL



(57) Abstract: A diesel engine (1) includes a fuel supply passage (4) via which fuel is supplied from a fuel tank (2) to an oil pan (3) through a supply pump (6), a lubrication-system fuel supply passage (8) via which fuel is supplied from the oil pan (3) to engine parts (7) to be lubricated through a lubricating oil pump (10), and an injection-system fuel supply passage (13) via which fuel is supplied from the oil pan (3) to an injection system (12) through an injection pump (12).